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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO.       |
|---|-------------|----------------------|---------------------------|------------------------|
| 10/758,192  | 01/16/2004  | Hideo Horigome       | 00862.023408.             | 4904                   |
| 5514 7590 01/28/2008<br>FITZPATRICK CELLA HARPER & SCINTO<br>30 ROCKEFELLER PLAZA<br>NEW YORK, NY 10112 |             |                      |                           |                        |
|   |             |                      | EXAMINER<br>FANTU, YALKEW |                        |
|   |             |                      | ART UNIT<br>2838          | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>01/28/2008   | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|  |                                      |  |  |
|--|--------------------------------------|--|--|
| <p align="center"><b>Office Action Summary</b></p> | <b>Application No.</b><br>10/758,192 | <b>Applicant(s)</b><br>HORIGOME, HIDEO |  |
|  | <b>Examiner</b><br>Yalkew Fantu      | <b>Art Unit</b><br>2838                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,11 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 11, 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/14/2007</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application<br>6) <input type="checkbox"/> Other: _____. |
|--|---|

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US 5,525,888) in view of Horigome et al (US 5,631,677).

With respect to claims 1, 2 and 18, Toya discloses electric charging apparatus Fig. 3, 1 and 30 for charging a secondary battery, which is held in the apparatus and being attachable to an electronic apparatus main body 10, being drive by electric power from the secondary battery while the electric charging apparatus is attached to the electronics apparatus (col. 3, lines 5-15), which charges a secondary battery 20 or 50 to supply electric power to the electronic apparatus 10, comprising: a communication unit (Fig. 3, 12 and 35) configured to periodically receive an electric charging control signal from the electronic apparatus 10, and indicating that an electrical charging of the secondary battery is enabled (col. 4, lines 27-30); determination means (col. 5, 1-5) for determining an electric charging condition for electrically charging the secondary battery 20; and control means (Fig. 3, 43; col. 4, 66-67) for controlling to start electric charging

of the secondary battery 20 based on electric charging control signal (signals from AC/DC (40) through the charging switch to secondary battery, and control (43) controls the on-off state of charging switch 41 (stops when charge completed)(col. 4, lines 65-67); (see Fig. 3) for the secondary battery 20, and the electric charging condition determined by said determination means(col. 5, lines 1-5), in case that either the electric charging control signal indicates permission of electric charging of the secondary battery, or the electric charging control signal is not received from the printer for a predetermined time period col. 5, lines (col. 6, lines 43-50; the microcomputers 43 and 10 are capable of performing periodically); and an input terminal (Fig. 3, 32) configured to input an electric power from a commercial power source (col. 4, lines 58-60); and power source relay means (Fig. 3, 41; as a relay is an electric switch that opens and closes under control of another electrical switch) for supplying the electric power supplied via said input terminal fig.3, 32 to the electronic apparatus fig. 3, 10, and relay-outputting the electric power for the electric charging of the secondary battery (col. 4, lines 58-65), however, Toya does not expressly disclose that the electronic apparatus is a printer, in which the secondary battery charging signals is communicating to this capped printer head as a means of communication.

Horigome et al., however, (here after called Horigome) discloses that said electronic apparatus is a printer (abstract), an image forming apparatus (col. 5, lines 38-40), and when an image forming instruction command is inputted from an external device while the electric charging unit electrically charges the secondary battery (Fig. 3, 24; col. 6, lines 7-15); on a printing medium by driving a print head (Fig. 3, 12; and col.

5, lines 33-36; fig. 4, S1010). Further more this image forming apparatus is an ink jet printing apparatus (col. 5, lines 17-20. see also Fig. 2), which forms an image on the printing medium by discharging ink from the print head.

Toya and Horigome et al. are analogous art because they are from the same field of endeavor namely battery charger and method of charging battery of printing apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to provide a battery charging method of a printing apparatus to the battery charging electronics of Toya in view of the teachings of Horigome to show that the common use of being portable electronics, such as a cell phone can equally be used for printer by providing a rechargeable battery in a case where the printing apparatus is of portable, compact type, a dual power supply arrangement, i.e., power is capable of being supplied by an AC adapter as well as by a battery. (Col. 1, lines 22-26).

Therefore, it would have been obvious to combine Horigome et al. with Toya for the benefit of battery charging method of a printer having a dual power arrangement means as taught by Horigome in view of Toya.

With respect to claims 17 and 20, Toya discloses an electric charging apparatus (Fig. 3, 1 and 30) attachable/removable to/from an electronic apparatus main body 10, which charges a secondary battery 20 and 50 to supply an electric power to the electronic apparatus 10, comprising: supply means (Fig. 3, 40 and 11) for supplying the electric power from the secondary battery 20, 50 to the electronic apparatus (col. 5,

lines 8-15); reception means (Fig. 3, 11 and 12 through communication means) for receiving a signal from the electronic apparatus 10; and control means (Fig. 3, 43; microcomputer) for, when it is instructed by the signal received by said reception means (Fig. 3, 11 and 12) to shut off a power source, stopping electric power supply (col. 4, lines 66-67) from the secondary battery 20 and 50 by said supply means (col. 4, lines 66-col. 5, lines 1-5); charging control means (Fig. 3, 43) for, when it is instructed by the signal received by said reception means (Fig. 3, 11 and 12) stopping electrical charging of the secondary battery, if a condition for electric charging the secondary battery 10 is satisfied, starting electric charging of the secondary battery (the microcomputer 64 controls the charging switch 61A to charge the secondary battery 20A when there is a feed back to microcomputer 64 by the current detection unit 62A. See Fig. 5; and col. 6, lines 20-30); an electric charging unit (Fig. 3, 1 and 30) including a secondary battery 20 or 50 is attachable/removable to/from, and which can be operated with electric power supply from the secondary battery 20 or 50 included in the electric charging unit 30, comprising: a communication unit (Fig. 3, 12 and 35) configured to perform communication with the electric charging unit (Fig. 3, 30); and transmission control means (transmit using the communication control means of Fig. 3, 13 and 43) for transmitting an electric charging control signal for the secondary battery 20 and / 50 to the electric charging unit 30 via said communication unit but, Toya does not disclose that the electronic apparatus is a printer. Horigome, on the other hand, discloses that the electronics apparatus is a printer (col. 5, lines 17-20. see also Fig. 2), where the

printer head has means of communicating to the charge control of the battery for the printer activities could be continued to accomplish the desire printing job.

Regarding claims 16 and 19, Toya discloses an input terminal (fig. 3, 32) configured to input an electric power from a commercial power source (col. 4, 58-60); determination means (COL. 5, 1-5) for determining whether or not electric charging of the secondary battery 10 is necessary; and control means (COL. 4, 66-67, microcomputer 43 of fig. 3) for, in a status where the electric power is supplied via said input terminal (Fig. 3, 32), if said determination means (col. 5, lines 1-5) determines that the electric charging of the secondary battery is necessary, controlling said transmission control means (Fig. 3, 43; col. 4, 66-67; and col. 6, lines 20-30) to transmit a signal indicating that the electric charging of the secondary battery is enabled. Further comprising power-source shut-off signal transmission control means (Fig. 3, 43; col. 6, lines 20-30) for transmitting a signal indicating power-source shut-off to the electric charging unit via said communication unit; but the Toya reference does not expressly disclose a printing apparatus. Horigome, however, discloses this as mentioned in the above rejection.

With respect to claims 15 and 21, Toya discloses the electric charging apparatus, wherein said determination means (col. 5, 1-5) determines whether or not the secondary battery is in abnormal state (col. 5, lines 17-27); and the abnormal state of the secondary battery is detected based on the temperature of the secondary battery (fig. 3, 23; col. 4, lines 66-68, col. 5, lines 1-7).

with a control and transmission control means according to claim 5 as set forth above in the 35 USC 102 rejection, but does not expressly disclose that the electronic apparatus is an image forming apparatus, i.e., a printer, which is an ink jet type.

Horigome et al. (here after called Horigome) discloses that said electronic apparatus is an image forming apparatus (col. 5, lines 38-40), and when an image forming instruction command is inputted from an external device while the electric charging unit electrically charges the secondary battery (Fig. 3, 24; col. 6, lines 7-15); and said image forming apparatus prints an image (col. 5, 38-40) on a printing medium by driving a print head (Fig. 3, 12; and col. 5, lines 33-36). Further more this image forming apparatus is an ink jet printing apparatus (col. 5, lines 17-20. see also Fig. 2), which forms an image on the printing medium by discharging ink from the print head.

Toya and Horigome et al. are analogous art because they are from the same field of endeavor namely battery charger and method of charging battery of printing apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to provide a battery charging method of a printing apparatus to the battery charging electronics of Toya in view of the teachings of Horigome to show that the common use of being portable electronics, such as a cell phone can equally be used for printer by providing a rechargeable battery in a case where the printing apparatus is of portable, compact type, a dual power supply arrangement, i.e., power is capable of being supplied by an AC adapter as well as by a battery. (Col. 1, lines 22-26).



Therefore, it would have been obvious to combine Horigome et al. with Toya for the benefit of battery charging method of an apparatus having a dual power arrangement means as taught by Horigome in view of Toya.

With respect to claims 11 and 22, electronic apparatus charging method; all the claims' limitations are met by the previous arguments of claims 1, 2 and 15-21 above.

### ***Response to Arguments***

Applicant's arguments filed on 03/01/2007 have been considered but are ineffective to overcome the Toya and Horigome references. (See the rejection above).

Regarding applicant argument that "Toya is not seen to disclose or suggest transmitting an electrical charging control signal for a secondary battery of a printer... nor Horigome are seen to disclose the features of periodically receiving an electrical charging control signal from the printer, and controlling to start electric charging of the secondary battery based on the determined electric charging condition ... " Toya, on the other hand discloses electric charging apparatus Fig. 3, 1 and 30 for charging a secondary battery, which is held in the apparatus and being attachable to an electronic apparatus main body 10, being drive by electric power from the secondary battery while the electric charging apparatus is attached to the electronics apparatus (col. 3, lines 5-15), which charges a secondary battery 20 or 50 to supply electric power to the electronic apparatus 10, comprising: a communication unit (Fig. 3, 12 and 35) configured to periodically receive an electric charging control signal from the electronic apparatus 10, and the electric charging condition determined by said determination means(col. 5, lines 1-5), in case that either the electric charging control signal indicates

permission of electric charging of the secondary battery, or the electric charging control signal is not received from the printer for a predetermined time period col. 5, lines (col. 6, lines 43-50; the microcomputers 43 and 10 are capable of performing periodically).

The examiner also notes that all the claimed elements of applicant's inventions were known in the prior art (e.g. electric charging apparatus, printer, communication unit, control signal, determination means, control, etc., and periodically receiving electric charging signal) and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Proper motivation/rationale to combine is as given in the office action. See KSR, 127 S. Ct. at 1740, 82 USPQ2d at 1396.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on M - F: 7- 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm E. Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary L Laxton/

Gary L. Laxton  
Primary Examiner  
Art Unit 2838

1/22/2008